Form PTO-1449 (Modified)

SHEET 1 of 5

U.S. Department of Commerce 28341/6216.NDV2
Patent and Trademark Office

10/657,399

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

| Applicant         |                  |
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| Fisher et al.     |                  |
| Filing Date       | Group            |
| September 8, 2003 | Not yet assigned |

| U.S. PATENT DOCUMENTS    |     |                    |               |                 |       |          |                            |
|--------------------------|-----|--------------------|---------------|-----------------|-------|----------|----------------------------|
| Examiner Initials        |     | Document<br>Number | Issue<br>Date | Name            | Class | Subclass | Filing Date If Appropriate |
| $\mathcal{N}\mathcal{N}$ | A1  | 5,283,173          | 02-01-94      | Fields, et al.  |       |          |                            |
| 1                        | A2  | 5,376,742          | 12-27-94      | Krause          |       |          |                            |
|                          | A3  | 5,457,189          | 10-10-95      | Crooke, et al.  |       |          |                            |
|                          | A4  | 5,547,846          | 08-20-96      | Bartsch, et al. |       |          |                            |
|                          | A5  | 5,576,206          | 11-19-96      | Schlegel        |       |          |                            |
|                          | A6  | 5,625,031          | 04-29-97      | Webster, et al. | - [   |          |                            |
|                          | A7  | 5,629,161          | 05-13-97      | Müller, et al.  |       |          |                            |
|                          | A8  | 5,681,944          | 10-28-97      | Crooke, et al.  |       |          |                            |
|                          | A9  | 5,736,318          | 04-07-98      | Münger, et al.  |       |          |                            |
| V                        | A10 | 5,811,232          | 09-22-98      | Crooke, et al.  |       |          |                            |

| FOREIGN PATENT DOCUMENTS |    |                    |                     |         |       |          |  |                                       |
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| *Examiner<br>Initials    |    | Document<br>Number | Publication<br>Date | Country | Class | Subclass | Translation                                      |                                       |
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| MΜ                       | B1 | 95/20652           | 08-03-95            | WO      |       |          | <del>                                     </del> |                                       |
| }                        | B2 | 98/13502           | 04-02-98            | WO      |       |          | 1  | · · · · · · · · · · · · · · · · · · · |
| y                        | B3 | 0 666 270 A2       | 08-09-95            | EPO     |       |          |  |                                       |

|    |    | OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)  |
|----|----|---|
| MM | C1 | Antinore, et al., "The human papillomavirus type 16 E7 gene product interacts with and trans-activates the AP1 family of transcription factors," EMBO. J., 15:1950-60 (1996)            |
|    | C2 | Arroyo, et al., "Association of the Human Papillomavirus Type 16 E7 Protein with the S-Phase-Specific E2F-Cyclin A Complex," Mol. Cel. Biol. 13:6537-6456 (1993)                        |
|    | C3 | Banks, et al., "Ability of the HPV16 E7 protein to bind RB and induce DNA synthesis is not sufficient for efficient transforming activity in NIH3T3 cells," Oncogene 5:1383-1389 (1990) |

| EXAMINER   | Λ                               | DATE CONSIDERED                                  |                           |
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| Applicant         |                  |
|-------------------|------------------|
| Fisher et al.     |                  |
| Filing Date       | Group            |
| September 8, 2003 | Not yet assigned |

| nM | C4   | Cane, et al., "Harnessing the Biosynthetic Code: Combinations, Permutations, and Mutations," Science 282:63-68 (1998)   |
|----|------|---|
|    | C5   | Chen, et al., "Cyclin-Binding Motifs Are Essential for the Function of p21 <sup>CIP1</sup> ," Mol. Cell. Biol. 16:4673-82 (1996)  |
|    | C6   | Cheng, et al., "Differentiation-dependent up-regulation of the human papillomavirus E7 gene reactivates cellular DNA replication in suprabasal differentiated keratinocytes," Genes & Dev. 9:2335-49 (1995) |
|    | C7   | Chow, et al., "Papillomavirus DNA Replication," Intervirology 37:150-8 (1994)   |
|    | C8   | Ciccolini, et al., "Functional studies of E7 proteins from different HPV types," Oncogene 9:2633-8 (1994)   |
|    | . C9 | Colas, et al., "The impact of two-hybrid and related methods on biotechnology," TIBTECH 16:355-363 (1998)   |
|    | C10  | Connell-Crowley, et al., "Phosphorylation Independent Activation of Human Cyclin-Dependent Kinase 2 by Cyclin A In Vitro," Mol. Biol. Cell 4:79-92 (1993)   |
|    | C11  | Davies, et al., "Human Papillomavirus Type 16 E7 Associates with a Histone H1 Kinase and with p107 through Sequences Necessary for Transformation," J. Virol., 67:2521-8 (1993)                             |
|    | C12  | Draetta, et al., "cdc2 Protein Kinase is Complexed with Both Cyclin A and B: Evidence for Proteolytic Inactivation of MPF," Cell 56:829-838 (1989)  |
|    | C13  | Dyson, et al., "Homologous Sequences in Adenovirus E1A and Human Papillomavirus E7 Proteins Mediate Interaction with the Same Set of Cellular Proteins," J. Virol. 66:6893-6902 (1992)                      |
|    | C14  | Dyson, et al., "The Human Papilloma Virus-16 E7 Oncoprotein Is Able to Bind to the Retinoblastoma Gene Product," Science 243:934-7 (1989)   |
|    | C15  | Fields, et al., "A novel genetic system to detect protein-protein interactions," Nature 340:245-246 (1989)  |
|    | C16  | Fields, "The Two-Hybrid System to Detect Protein-Protein Interactions," Methods: A Companion to Methods in Enzymology 5:116-124 (1993)  |
|    | C17  | Funk, et al., "Inhibiting CDK inhibitors: new lessons from DNA tumor viruses," Elsevier Science Ltd. 337-341 (1998)   |
|    | C18  | Funk, et al., "Inhibition of CDK activity and PCNA-dependent DNA replication by p21 is blocked by interaction with the HPV-16 E7 oncoprotein," Genes & Dev. 11:2090-100 (1997)                              |
|    | C19  | Galloway, et al., "The disruption of cell cycle checkpoints by papillomavirus oncoproteins contributes to anogenital neoplasia," Semin. Cancer Biol. 7:309-15 (1996)  |

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| •   | September 8, 2003 | Not yet assigned |  |

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|----|-------------|--|
| MM | C20         | Harper, et al., "The p21 Cdk-Interacting Protein Cip1 Is a Potent Inhibitor of G1 Cyclin-Dependent Kinases," Cell 75:805-816 (1993)  |
|    | C21         | Houston, et al., "The chemical-biological interface: developments in automated and miniaturised screening technology," Curr. Opin. Biotechnol. 8:734-740 (1997)  |
|    | C22         | Jayawickreme, et al., "Gene expression systems in the development of high-throughput screens," Curr. Opin. Biotechnol. 8:629-634 (1997)  |
|    | C23         | Jones, et al., "The human papillomavirus E7 oncoprotein can uncouple cellular differentiation and proliferation in human keratinocytes by abrogating p21 <sup>Cip1</sup> -mediated inhibition of cdk2," Genes & Dev. 11:2101-11 (1997) |
|    | C24         | Jones, et al., "Interactions of the human papillomavirus E7 protein with cell cycle regulators," Cancer Biology 7:327-337 (1996)   |
|    | C25         | Koonin, "A common set of conserved motifs in a vast variety of putative nucleic acid-dependent ATPases including MCM proteins involved in the initiation of eukaryotic DNA replication," <i>Nucl. Acids Res.</i> 21:2541-7 (1993)      |
|    | C26         | Ma, et al., "Interaction between cyclin-dependent kinases and human papillomavirus replication-initiation protein E1 is required for efficient viral replication," <i>Proc. Natl. Acad. Sci. (USA)</i> 96:382-7 (1999)                 |
|    | C27         | Massimi, et al., "HPV-16 E7 and adenovirus E1a complex formation with TATA box binding protein is enhanced by casein kinase II phosphorylation," Oncogene 12:2325-30 (1996)  |
|    | C28         | McIntyre, et al., "Human Papillomavirus E7 Oncoproteins Bind a Single Form of Cyclin E in a Complex with cdk2 and p107," Virology 215:73-82 (1996)   |
|    | C29         | Morgan, "CYCLIN-DEPENDENT KINASES: Engines, Clocks, and Microprocessors," Ann. Rev. Cell Dev. Biol. 13:261-291 (1997)  |
|    | C30         | Mulligan, et al., "The retinoblastoma gene family: cousins with overlapping interests," Trends Genet 14:223-9 (1988)   |
|    | C31         | Myers, "Will combinatorial chemistry deliver real medicines?" Curr. Opin. Biotechnol. 8:701-707 (1997)   |
|    | C32         | Pei, et al., "HPV-16 E7 protein bypasses keratinocyte growth inhibition by serum and calcium," Carcinogenesis 19:1481-6 (1998)   |
|    | C33         | Phelps, et al., "Structure-Function Analysis of the Human Papillomavirus Type 16 E7 Oncoprotein," J. of Virol. 66:2418-2427 (1992)   |
|    | C34         | Pietenpol, et al., "TGF-*1 Inhibition of c-myc Transcription and Growth in Keratinocytes Is Abrogated by Viral Transforming Proteins with pRB Binding Domains," Cell 61:777-85 (1990)  |
|    | C35         | Pines, et al., "Human cyclin A is adenovirus E1A-associated protein p60 and behaves differently from cyclin B," Nature 346:760-763 (1990)  |

| EXAMINER                        | mode  | DATE CONSIDERED \ 9-28-05  |
|---------------------------------|---|--|
| *EXAMINER:<br>citation if not i | Initial if reference considered, win conformance and not considered | whether or not citation is in conformance with MPEP 609; Draw line through ed. Include copy of this form with next communication to applicant. |

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| U.S. Department of Commerce Patent and Trademark Office | 28341/6216.NDV2   | 10/657,399       |  |
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|   | Fisher et al.     |                  |  |
|   | Filing Date       | Group            |  |
|   | September 8, 2003 | Not yet assigned |  |

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|----|-----|---|
| MM | C36 | Polyak, et al., "Cloning of p27Kip1, a Cyclin-Dependent Kinase Inhibitor and a Potential Mediator of Extracellular Antimitogenic Signals," Cell 78:59-66 (1994)   |
| 1  | C37 | Remington's Pharmaceutical Sciences, 18 <sup>th</sup> Ed. (1990, Mack Publishing Co., Easton, PA 18042) pages 1435-1712   |
|    | C38 | Ruesch, et al., "Human Papillomavirus Oncoproteins Alter Differentiation-Dependent Cell Cycle Exit on suspension in Semisolid Medium," Virol. 250:19-29 (1998)  |
| :  | C39 | Scheffner, et al., "The E6 Oncoprotein Encoded by Human Papillomavirus Types 16 and 18 Promotes the Degradation of p53," Cell 63:1129-36 (1990)   |
|    | C40 | Seedorf, et al., "Human Papillomavirus Type 16 DNA Sequences," Virol. 145:181-185 (1985)  |
|    | C41 | Sverdrup, et al., "Replication of Human Papillomavirus (HPV) DNAs Supported by the HPV Type 18 E1 and E2 Proteins," J. Virol. 68:505-509 (1994)   |
|    | C42 | Tommasino, et al., "HPV16 E7 protein associates with the protein kinase p33CDK2 and cyclin A," Oncogene 8:195-202 (1993)  |
|    | C43 | Toyoshima, et al., "p27, a Novel Inhibitor of G1 Cyclin-Cdk Protein Kinase Activity, Is Related to p21," Cell 78:67-74 (1994)   |
|    | C44 | Wu, et al., "The Human Papillomavirus E7 Oncoprotein and the Cellular Transcription Factor E2F Bind to Separate Sites on the Retinoblastoma Tumor Suppressor Protein," J. Virol. 67:2402-7 (1993)         |
|    | C45 | Zerfass, et al., "Inactivation of the cdk inhibitor p27KIP1 by the human papillomavirus type 16 E7 oncoprotein," Oncogene 13:2323-30 (1996)   |
|    | C46 | zur Hausen, "Papillomavirus infections — amajor cause of human cancers," <i>Biochim. Biophys. Acta</i> 1288:F55-78 (1996)   |
|    | C47 | Desai, et al., "Activation of Human Cyclin-Dependent Kinases In Vitro," Mol. Biol. Cell. 3:571-582 (1992)   |
|    | C47 | Desai, et al., "Activation of Human Cyclin-Dependent Kinases In Vitro," Mol. Biol. Cell. 3:571-582 (1992)   |
|    | C47 | Desai, et al., "Activation of Human Cyclin-Dependent Kinases In Vitro," Mol. Biol. Cell. 3:571-582 (1992)   |
|    | C48 | Roberts, "Evolving Ideas about Cyclins," Cell 98:129-132 (1999)   |
|    | C49 | Ben-Bassat, et al., "Inhibitors of Epidermal Growth Factor Receptor Kinase and of Cyclin-dependent Kinase 2 Activation Induce Growth Arrest, Differentiation, and Cancer Research 57(17):3741-3750 (1997) |
|    | C50 | Colas, et al., "Genetic selection of peptide aptamers that recognize and inhibit cyclin-dependent kinase 2," Nature 380:548-550 (1996)  |

| EXAMINER MOSKS   | DATE CONSIDERED 9-28-05  |
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| *EXAMINER: Initial if reference considered, whether citation if not in conformance and not considered. Inc | or not citation is in conformance with MPEP 609; Draw line through |

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| (Use several sheets if necessary)                    | Fisher et al.     |                  |
|  | Filing Date       | Group            |
|  | September 8, 2003 | Not yet assigned |

| ΜM | C51 | Funk, et al., "Inhibitor of CDK activity and PCNA-dependent DNA replication by p21 is blocked by interaction with the HPV-16 E7 oncoprotein," Genes & Devel. 11:2090-2100 (1997) |
|----|-----|--|
|    | C52 | International Search Report from PCT/US00/23487.   |

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